

Do you need skills
in vegetative
propagation of
forest trees?



Photo: Mätlä/Tuija Aronen

Opportunity to study vegetative propagation techniques

The EU Trees4Future network offers an opportunity to work within your own project at the vegetative propagation lab of the Finnish Forest Research Institute Metla in Punkaharju, Finland.

The Metla Punkaharju Research Unit provides a complete infrastructure for vegetative propagation studies of trees. Within the infrastructure development and testing of different kind of tissue culture techniques can be done, followed by acclimatisation and cultivation of the produced plants under greenhouse and nursery conditions. Also experiments in grafting or rooting of cuttings can be performed.

The infrastructure has a full-equipped tissue culture and molecular biology laboratory (434 m²), in which quality system according to SFS-EN ISO/IEC 17025 standard is applied. The infrastructure also includes special greenhouses for growing genetically modified plants as well as conventional greenhouses that include both all-year-round greenhouses and summer greenhouses, as well as a nursery.

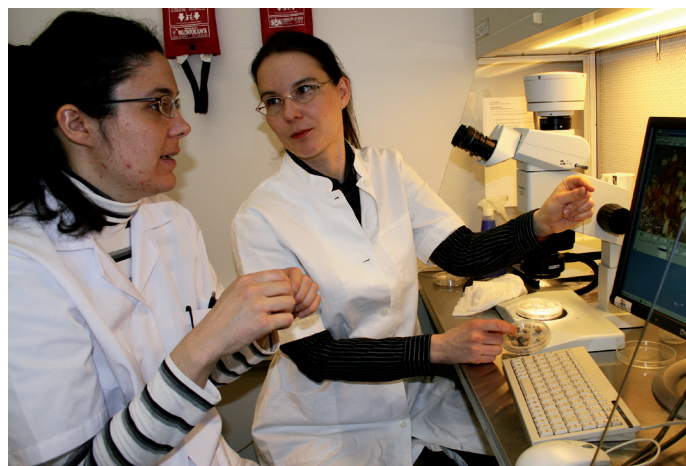


Photo: Metla/Teijo Nikkanen

Examining tissue cultures in a laminar hood

The laboratory includes

- Separate laboratory rooms with 8 laminar hoods equipped with microsterilators both for clean aseptic working and for microbiological work with fungal and bacterial cultures
- Two in vitro growth rooms with adjustable temperature and light conditions
- Media preparation facilities including MediaClave apparatus
- Several PCR devices and other molecular biology equipments needed for characterisation of tissue cultured materials
- Research microscope with UV-light and several stereomicroscopes equipped with digital cameras
- Spectrophotometer
- Image analysis system for seed, leaves, and roots.
- Cold- and freezing room capacities: rooms of 8°C, +4°C, -5°C, -20°C, and several ultra-freezers
- Special greenhouses (123 m²) for growing genetically modified plants

- Conventional greenhouses that include both all-year-round greenhouses (431m²) with controlled temperature, air humidity and light conditions and summer greenhouses
- A fenced nursery with automated watering

A visit lasting from several weeks to several months, depending on the research topic. Before arrival, a work plan will be agreed upon. A guest can arrive with his/her own materials or the EVOLTREE Punkaharju ISS Infrastructures can be utilised as explant source. During the stay, the guest performs for example tissue culture initiation, proliferation/ multiplication, SE maturation, plantlet rooting / SE germination, or clonal identification experiments, supported by the guidance of the host scientist and technicians. Results are digitalised. Data analysis and interpretation are based on in-house experience with software available. If possible, reports and manuscripts will be prepared while the guest is still at the site, or by e-mail exchange afterwards.

Applications and further information

The EU is financing access to the lab (the costs for running the facility, as well as travel and boarding costs) up to 3 months through the Trees4Future network. Access is open for both scientific as practical needs within the EU and its associated countries. Applications for access to the vegetative propagation lab have to be made through the Trees4Future application system.

<http://www.trees4future.eu/transnational-accesses.html>

Further information:

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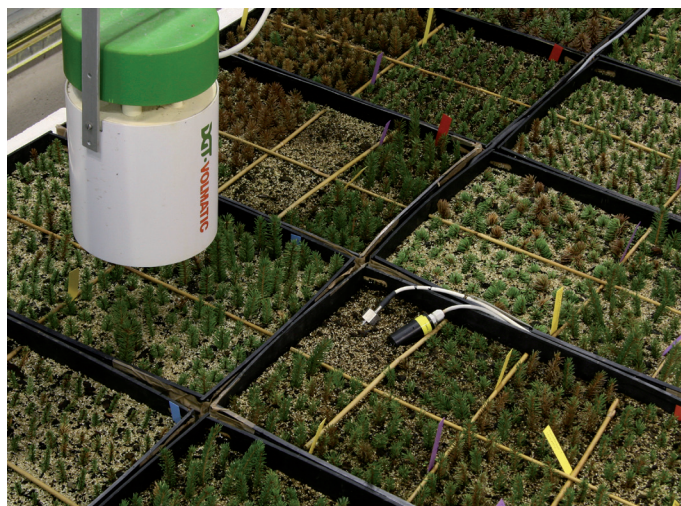


Photo: Metla/Teijo Nikkanen

Coniferous shoot cuttings being rooted.